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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,953	10/30/2003	Sean Donald Robert Code	3459-Z	6275
7590 Law Office of Jim Zegeer Suite 108 801 North Pitt Street Alexandria, VA 22314		06/13/2007	EXAMINER ANYA, CHARLES E	
			ART UNIT 2194	PAPER NUMBER
			MAIL DATE 06/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/695,953

Applicant(s)

CODE ET AL.

Examiner

Charles E. Anya

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3/MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/29/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.


### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
WILLIAM THOMSON  
SUPERVISORY PATENT EXAMINER

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 16-26 are pending in this application.

#### ***Claim Objections***

Claim 26 is objected to because of the following informalities:

Claim 26 appears include typographical error. Specifically, "sending the job queue to locate" does seem to have been used in error. A "job queue" cannot be sent to locate a task, as the claim appears to suggest. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2003/0191795 A1 to Bernardin et al. in view of U.S. Pub. No. 2003/0120709 A1 to Pulsipher et al.**

3. As to claim 16, Bernardin teaches a method of scheduling tasks within a computing device, comprising the steps of: a) maintaining a multi-level work queue of a plurality of waiting tasks awaiting scheduling, said waiting tasks being ordered in said

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multi-level work queue according to an associated priority ("...Waiting Task List..." page 3 paragraphs 0031/0034/0036, "...adding the task...waiting task list..." page 6 paragraph 0069); b) scheduling tasks from the highest priority level of said work queue into a job queue, for scheduling a first task from said multi-level work queue into said job queue ("...Pending Task List..." page 3 paragraph 0032, "...pending tasks..." page xx paragraph 009).

Bernardin is silent with reference to attempting to locate a selected task from within the job queue which is capable of being executed simultaneously with the first task, while considering only the tasks in said job queue with a priority equal to that of the first task; and if such a selected task is located, replacing said selected task with a combined task that comprises the first task and the selected task for simultaneous execution.

Pulsipher teaches attempting to locate a selected task from within the job queue which is capable of being executed simultaneously with the first task, while considering only the tasks in said job queue with a priority equal to that of the first task (page 2 paragraph 0024, Block 404 page 8 paragraph 0113); and if such a selected task is located, replacing said selected task with a combined task that comprises the first task and the selected task for simultaneous execution ("...each respective job are collectively executed in parallel with each other..." page 8 paragraph 0114).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bernardin with teaching of Pulsipher

because the teaching of Pulsipher would improve the system of Bernardin by optimizing resource usage (Pulsipher page 5 paragraph 0072).

4. As claims 17 and 18, see the rejection of claim 16 above.

5. As to claim 19, Bernardin teaches a method of scheduling tasks within a computing device, comprising the steps of: a) maintaining a multi-level work queue of a plurality of waiting tasks awaiting scheduling, said waiting tasks being ordered in said multi-level work queue according to an associated priority ("... Waiting Task List..." page 3 paragraphs 0031/0034/0036, "...adding the task...waiting task list..." page 6 paragraph 0069); b) scheduling said waiting tasks from said multi-level work queue into a job queue ("... Pending Task List..." page 3 paragraph 0032, "...pending tasks..." page 6 paragraph 009); c) determining whether the computing device has sufficient resources to execute a first task being currently scheduled;/d) if the computing device has sufficient resources to execute the first task ("... Discriminator..." page 5 paragraph 0056-0060, "...an indication from a processing resource that the resource is available..." page 6 paragraph 0069, "...indication of availability..." page 7 paragraphs 0070/0072/0074, page 8 paragraph 0078, page 10 paragraph 0115), the method comprising the further steps of:

Bernardin is silent with reference to attempting to locate a selected task from within the job queue which is capable of being executed simultaneously with the first task, while considering only the tasks in said job queue with a priority equal to that of

the first task; and if such a selected task is located, replacing said selected task with a combined task that comprises the first task and the selected task for simultaneous execution.

Pulsipher teaches attempting to locate a selected task from within the job queue which is capable of being executed simultaneously with the first task, while considering only the tasks in said job queue with a priority equal to that of the first task (page 2 paragraph 0024, Block 404 page 8 paragraph 0113); and if such a selected task is located, replacing said selected task with a combined task that comprises the first task and the selected task for simultaneous execution ("...each respective job are collectively executed in parallel with each other..." page 8 paragraph 0114).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bernardin with teaching of Pulsipher because the teaching of Pulsipher would improve the system of Bernardin by optimizing resource usage (Pulsipher page 5 paragraph 0072).

6. As to claim 20, Bernardin teaches the method of claim 19 further comprising, if the computing device does not have sufficient resources to execute the first task, the steps of: a) determining whether the first task is time sensitive; b) if the first task is time sensitive, rejecting the first task; and c) if the first task is not time sensitive, attempting to schedule a next task of the same priority as said first task before re-attempting to schedule the first task ("...processing time..." page 4 paragraphs 0047/0048, page 27 paragraph 0514).

7. As to claims 21-23, see the rejection of claims 19 and 20 above.
8. As to claims 24 and 25, see the rejection of claim 20 above.
9. As to claim 26, see the rejection of claim 16 above.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is 571-272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cea.

  
WILLIAM THOMSON  
SUPERVISORY PATENT EXAMINER